

3/190/62/004/008/013/016

Investigation of light scattering and ... B101/B180

1909, 1951), and W. R. Kriegbaum and P. Flory (J. Polymer Sci., 11, 37, 1953). (2) The equilibrium flexibility  $(\bar{h}_0^2/h_f^2)^{1/2}$  of polyisobutylene molecules was greater than that of the other vinyl polymers. Calculated from viscosity equilibrium flexibility (1.86) is larger than when calculated by light scattering (1.6). W. Kriegbaum and D. Carpenter (J. Phys. Chem., 59, 1166, 1955) attribute this to dependence of the Flory constant  $\Phi$  on the type of solvent. Direct measurements of  $(\bar{h}_0^2)^{1/2}$  are to be made, to solve this problem. There are 6 figures and 1 table.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

SUBMITTED: June 7, 1961

Card 2/2

SOV/25-59-1-42, 51

AUTHOR: Mostepanenko, M.V., Candidate of Philosophical Sciences  
(Leningrad)

TITLE: The Conquest of Space - A Proof Against Religion  
(Kosmonavtika protiv religii)

PERIODICAL: Nauka i zhizn', 1959, Nr 1, pp 74-75 (USSR)

ABSTRACT: This is a review of the book "Velikiy shag chelovechestva"  
"A Great Step of Mankind" by V.A. Bryukhanov. There is  
one photo.

Card 1/1

SVIDERSKIY, V.I., doktor fil. nauk; SHTOFF, V.A., kand. fil. nauk;  
IZMAYLOV, S.V., kand. fiz.-mat. nauk; BRANSKIY, V.P., kand.  
fil. nauk; MOSTEPANENKO, M.V., kand. fil. nauk; MELYUKHIN,  
S.T., kand. fil. nauk; MIKHLIN, Ye.I., red.; YELIZAROVA,  
N.A., tekhn. red.

[Philosophical problems in the present-day theory of motion  
in nature] Filosofskie voprosy sovremennoego ucheniya o dvi-  
zhenii v prirode. Leningrad, 1962. 198 p. (MIRA 15:10)

1. Leningrad. Universitet.  
(Science--Philosophy) (Motion)

MOSTEPANENKO, Mikhail Vasil'yevich; SHCHERBINA, I., red.; YEROSHKINA, L.,  
mladshiy red.; NOGINA, N., tekhn. red.

[Materialist nature of A.Einstein's theory of relativity] Mate-  
rialisticheskaiia sushchnost' teorii otnositel'nosti Einshteina.  
Moskva, Sotskgiz, 1962. 226 p. (MIRA 15:7)  
(Relativity (Physics))

PREISOVA, Juliana; MOSTER, Milan

Electrophoretic examination of albumin content of aqueous humor.  
Cesk. ofth. 14 no.3:185-189 June 58.

1. Ocni klinika MU v Brne, prednosta prof. Dr. Jan Vanysek.  
(AQUEOUS HUMOR  
    albumin content, electrophoresis (Cz))  
(ALBUMIN, determ.  
    in aqueous humor, electrophoresis (Cz))

MOSTER, M.; PREISOVA, J.; KOCENT, A.

Polarography of sulfosalicylate filtrate in the human crystalline lens. Cesk.ofth.16 no.7:465-468 N'60.

1. Oeni klinika v Brne, prednosta profesor MUDr. Jan Vanysek,  
doktor lek. ved. Onkologicky ustav v Brne, prednosta docent  
MUDr. Jan Sprindrich.  
(LENS CRYSTALLINE chem)

PREISOVA, J.; SIMEK, K.; MOSTER, M.

On the pathogeneity of staphylococci of the conjunctival sac and on its relation to local treatment with antibiotics. Česk. ofth. 17 no.6:461-467 S '61.

1. Okni klinika v Brne, prednosta prof. MUDr. Jan Vanysek, Dr. Sc., Mikrobiologicky ustav SFN v Brne, prednosta prof. MUDr. Vaclav Tomasek.

(CONJUNCTIVA microbiol)  
(STAPHYLOCOCCUS pharmacol)  
(ANTIBIOTICS pharmacol)

PREISOVA, Juliana; MOSTER, Miroslav

Contribution to the origin of subretinal fluid. I. Electrophoresis  
of subretinal fluid. Cesk. oftal. 18 no.4:245-251 Jl '62.

1. Ocni klinika lekarske fakulty University J. Ev. Purkyne v Brne,  
prednosta prof. dr. J. Vanysek, DrSc.

(ELECTROPHORESIS) (RETINAL DETACHMENT pathology)

MOSTER, Miroslav; PREISOVA, Juliana

Contribution to the origin of subretinal fluid. II. Mucoproteins in  
subretinal fluid. Cesk. oftal. 18 no.4:252-258 Jl '62.

1. Ocni klinika lekarske fakulty University J. Ev. Purkyne v Brne,  
prednosta prof. dr. J. Vanysek, DrSc.

(RETINAL DETACHMENT pathology)  
(MUCOPROTEINS chemistry)

YUGOSLAVIA/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81714

Author : Verkade P., Stegerhoek L, Mostert-Pzn S.

Inst :

Title : The Utilization of Silver Salts or Phenylbenzyl Phosphoric Acid for the Synthesis of the Monophenyl Ester of Phosphatides (Previous Communication).

Orig Pub: Croat chem acta 1957, 29, No 3-4, 413-517.

Abstract: The preparation of  $R_2P(O)(CH_2)OC_6H_5$  (I) here and later, of  $R = CH_2CH_2OOCCH_2CH_2OCH_3$  is described. From  $(C_6H_5CH_2O)_2P(O)$  and  $SOCl - (C_6H_5CH_2O)PCl$  is synthesized from which by the reaction with  $C_6H_5ONa$ ,  $(C_6H_5CH_2O)_2P(O)(OC_6H_5)$  was obtained, which by boiling with NaI in acetone gives the salt  $(C_6H_5CH_2O)(C_6H_5O)_2P^+$

Card : 1/3

YUGOSLAVIA/Organic Chemistry. Synthetic Organic Chemistry

G-2

Abs Jour: Ref Zhur-Khim , No 24, 1958, 81714.

P(O)CNa, which was afterwards converted into  $(C_6H_5CH_2O)(C_6H_5O)P(O)OAg$  (II). By boiling II with  $ICH_2CH_2CCCC_6H_5$  in benzene, the yield of  $(C_6H_5CH_2O)(C_6H_5O)P(O)(OR)$  (III) was 80-85%. By the hydrogenation of III in alcohol ( $\sim 20^\circ C.$ ) with Pd/C (Verkade P.E. and others, Rec trav chim., 1940, 59, 1134), the debenzylation begins and I is formed, yield 90%. One mole of I in dioxane with Pt/C absorbed 4 moles of hydrogen, and gives the corresponding phosphatides,  $(C_6H_5O)(C_6H_5CH_2O)P(O)CH_2CH_2CH_2CCCC_6H_5$ , (IV) and  $(C_6H_5O)P(O)(OCH_2CH_2CH_2O)CH_2CH_2CCCC_6H_5$ , (V) have very sharp melting points, ( $42-43^\circ C.$ , and  $54.5-55.5^\circ C$  respectively), and were obtained similarly in high yields (80-85%). It seems that IV and V are

Card : 2/3

YUGOSLAVIA/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Ref Zhur-Khim , No 24, 1958, 81714

are formed chiefly in the form of one diastereoisomer  
(See R. Zh. Khim , 1958, 39717)

Card : 3/3

38

MOSTERT, P.S.

Continua meeting an orbit at a point. Fund math 52 no.3:319.  
321 '63.

1. Tulane University and Tübingen University.

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001135410011-4

MAINTYNOV, A.N. (MOSKVA, 1971)

Pravil'noe upravlenie prirodnyimi resursami v SSSR  
Izv.vyn.schet.zav., Moskva, 1971, 120 s.

I. Ivanovskiy energeticheskaya promst. i gospodarka

(M RA 08:8)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001135410011-4"

~~HOSTINSKAYA, R.Z. (Dzerzhinsk) ; BORTNIK, L.I.(Dzerzhinsk)~~

Calculating air exchange in electrolytic shops. Vod. i san. tekhn.  
no.9:36-37 S '58. (MIRA 11:10)  
(Factories--Heating and ventilation)

MOSTINSKAYA, S. B.

Mostinskaja, S. B.  
Uspredentsev, A. M.  
Dokl. Akad. Nauk SSSR  
1951, v. 87, no. 1, p. 109-125.

4.6.158

551.573.551.579.5

\*Mostinskaja, S. B. Osobennosti raskhodovaniia vлаги mnogoletnimi travami. [Peculiarities of transpiration of soil moisture by perennial grasses.] Leningrad. Glavnoe Upravlenie Gidrometeorologicheskoi Sluzhby, Informatsionnyi Sbornik, No. 1.109. 125, 1951. 16 tables, 10 refs. DLC - Data are given for the changes of productive moisture in different layers under black fallow, summer wheat, lucerne and red clover. These data are compared with the development of the root system. The author gives regression equations for the dependence of the moisture changes on temperature, precipitation and moisture content during different development phases of lucerne and clover. The moisture exchange between the root layer and lower layers is not considered. Subject Headings: 1. Soil moisture 2. Evapo-transpiration. -A.A

geo (2)

Georgian, L. . .

"Regime of the Moisture of Soil in Spruce Forests and its Dependence upon Precipitation in Zvezdnye (Tbilisi Region)," (Internat. J. Wood Sci., 1959, No. 1).

A 2-year (1956-1957) field-investigation into the regime of soil moisture was made in the distribution of snow cover on interzonal fields and by normalization of precipitation. The results of the investigation in the forest belt zone of the principal forest zone from west to east. The size of the forest margin is 15-20 m, and the width 15-17 meters in the case of tree cover height of 5 to 7 meters. As a result of the investigations it was shown that the increase in the reserves of water in the snow cover in the interzonal field amounts to 40-70% in comparison with open sites; the increase in the reserves of soil moisture reaches 100% in close to the forest belt, 35-40% in the center of the field, and 40-50% for the entire interzonal field. The influence of the forest belts on the water regime of soils is clearly expressed at a distance of 10-15 meters from the belts of the tree line height of the zone 15 m. In the opinion of the author the obtained data can be extended to other sites of a continental climate (in dry regions, by dry conditions of climate, by deep-standing ground waters, etc.) and in areas of brown forest soil. (RZhGeol, No. 4, 1959) SG: Sum. o. 719, 9 Nov 79

Int'l. Forecasting Inst, Moscow

MOSTINSKAYA,S.B.

Agricultural meteorological growing conditions of spring wheat in the irrigated region of the Kuybyshev hydroelectric development. Trudy TSIP no.29:106-127 '55.

(MIRA 8:6)

(Kuybyshev Hydroelectric Power Station region--Wheat)

41195  
S/194/62/000/007/007/160  
D222/D309

AUTHORS: Yershova, N.M., Mostinskaya, S.B., and Rudneva, T.L.

TITLE: Arithmetical block

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,  
no. 7, 1962, abstract 7-1-20 yu (In collection: Siste-  
ma avtomatiz. programmirovaniya, M., Fizmatgiz, 1961,  
88 - 106)

TEXT: The arithmetical block of the programming program written  
at the Vychislitel'nyy tsentr MGU (Computer Center, MGU) for the  
Strela (Strela) computer is described. The arithmetical block con-  
sists of four sub-blocks which serve for the sorting of information,  
the preliminary processing of powers, the programming of arithmeti-  
cal operators (0) and for the economization of instructions in the  
object program. The information for the arithmetical 0's is a coded  
description of formulas of the form  $f_1(x_1, x_2, \dots, x_k) \Rightarrow y_i$ ,  
using a set of elementary operations which is wider than the set of  
operations of the computer. All symbols are coded in symbolic num-  
Card 1/2

Arithmetical block

S/194/62/000/007/007/160  
D222/D309

bers. A priority is established for the execution of the five classes of operations defined. Methods are given for the specification and coding of information on group operations and information on the logical conditions in arithmetical O's. Algorithms for the sub-blocks of the arithmetical block are described. The sorting sub-block does some preliminary processing to prepare information for the arithmetical block. The sub-block for powers in the general case replaces powers by logarithmic operations according to the formula  $a^B = e^{B \ln a} = \exp(B \ln a)$  and inserts instructions to call in the standard programs  $\ln x$  and  $e^x$ . A number of special cases are singled out ( $B$  is positive or negative integer,  $B = k/2$ , where  $k$  is an integer, etc.). The sub-block for programming composes the programs for the arithmetical O's. The programming is accompanied by an economization of instructions, done by a separate sub-block. Economization of instructions is provided for six types of equivalent expressions, e.g. for  $x^2$ ,  $x + y$  and their equivalents  $xx$  and  $y + x$ . [Abstracter's note: Complete translation.]

Card 2/2

L 19410-63

EPA(b)/EWT(1)/BDS/ES(v) AEDC/AFFTC/ASD/AFMDC Pd-4/Pe-4  
S/0044/63/000/006/B065/B065

ACCESSION NR: AR3005379

SOURCE: RZh. Matematika, Abs. 6B292

AUTHOR: Zhidkov, N. P.; Korneychuk, A. A.; Krylov, A. L.; Mostinskaya, S. B.

TITLE: Plane-parallel motion of a viscous fluid between rotating cylinders

CITED SOURCE: Sb. rabot Vychisl. tsentra Mosk. un-ta, v. 1, 1962, 152-166

TOPIC TAGS: viscous fluid motion, Reynolds number, fluid, fluid motion

TRANSLATION: The authors describe in detail the numerical solution of the problem of non-stationary plane motion of a viscous non-compressible fluid between two coaxial rotating cylinders. The equation for the flow function was solved in polar coordinates. The initial field for the flow function had two point eddies. The choice of a difference scheme was based on the model equation  $u_t = \gamma u_{xx} + au_x$ .

The computation was carried out according to a three-layer scheme of the "cross" type by the method of matrix run-through on the "Strela" computer at the Computing Center of Moscow State University. As is noted in the article, the results of computation show that with increasing  $t$  the solution emerges into a certain stationary regime. With an increasing Reynolds number this emergence slow down and the

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L 19410-63

ACCESSION NR: AR3005379

smoothness of the solution experiences a stage of deterioration (turbulization of motion), after which there once again an improvement in the smoothness prior to emergence into a stationary regime. B. Rusanov.

DATE ACQ: 24Jul63

SUB CODE: MM

ENCL: 00

Card 2/2

DUBROVKIN, S.D., kand.tekhn.nauk; YEKHLAKOV, S.V., kand.tekhn.nauk;  
MOSTINSKAYA, S.B., inzh.

Using electronic computers in the investigation of thermal  
processes of polyethylene pipe welding. Vod. i san. tekhn.  
no. 8:20-22 Ag '65. (MIRA 18:12)

1-4140-65 EWT(d) Pg 4 IJP(c)  
ACCESSION NR: A15010204

UR/3043/65/000/003/0147/0162

AUTHOR: Samarskiy, A. A.; Mostinskaya, S. B.

TITLE: Methods for solving differential equations and adjacent problems

SOURCE: Moscow. Universitat. Vychislitel'nyy tsentr. Sbornik rabot, no. 3, 1965. Vychislitel'nyye metody i programmirovaniye (Computing methods and programming), 147-162

TOPIC TAGS: numerical analysis, heat conduction equation, two dimensional equation, locally one dimensional method

ABSTRACT: This article deals with the numerical solution of the two-dimensional quasilinear heat-conduction equation written in polar coordinates whose coefficients have discontinuities of the first kind and whose boundary conditions are of the third kind. The locally-one-dimensional method developed previously by A. A. Samarskiy (Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 2, no. 5, 1962) for the solution of parabolic equations is used to solve this equation. A uniform locally one-dimensional difference scheme is

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L 44140-65

ACCESSION NR: AT5010204

constructed in such a way that the discontinuities of the coefficients coincide with the lattice points of the computational net. The construction of the difference scheme is achieved by means of successive solutions of one-dimensional heat-conduction equations obtained by the Seidel iterative method. The convergence of the method is analyzed for uniform and non-uniform nets and the rate of convergence is established. The variation of the accuracy of the method with the variation of the mesh size of the net is analyzed. Numerical solutions of three examples illustrate the applicability of the proposed method. The authors conclude that this method is sufficiently accurate and absolutely stable, each for non-uniform nets. Therefore, this method makes it possible to carry out calculations with sufficiently large time steps and to obtain quick solutions for many physical problems. It is indicated that the method can be realized on high-speed electronic computers. Orig. art. has: 4 figures and 21 formulas. [LK]

ASSOCIATION: Vychislitel'nyy tsentr, Moskovskiy universitet (Computing Center,  
Moscow University)

SUBMITTED: 00

ENCL: 00 SUB CODE: MA, TD

NO REC'D BY: 010  
Card 2/2

OTHER: 000 ATD PRESS: 3247

MOSTINSKIY, I.B., inzh.; ENGEL'S, G.G., inzh.; GOROSHKOV, Yu.I., kand.  
tekhn.nauk

Efficient design for joint clamps of contact wires. Vest.TSNII  
MPS 18 no.3:46-48 My '59. (MIRA 12:8)  
(Electric railroads--Wires and wiring)

MOSTINSKIY, I.L.; MIROPOL'SKIY, Z.L.

Investigation of heat exchange during surface boiling of water  
and methyl alcohol on a horizontal tube. Nauch.dokl.vys.shkoly;  
energ. no.3:157-164 '58. (MIRA 12:1)

1. Rekomendovano Energeticheskim institutom AN SSSR.  
(Heat--Transmission)

SOV/96-59-11-11/21

AUTHOR: Miroslavskiy, S.L., Candidate of Technical Science  
Mostinskiy, I.L., Engineer

TITLE: Critical Heat-flow During Uniform and Non-Uniform  
Heating of the Perimeter of Steam-Raising Tubes  
(Kriticheskiye teployye potoki pri ravnomernom i  
neravnomerrom obozreve perimetra parogeneriruyushchikh  
trub)

PERIODICAL: Teploenergetika, 1958, kr 11, pp 64-69 (USSR)

ABSTRACT: A good deal of work has been done on critical values  
of heat flow in vertical tubes with uniform heating  
but in practical conditions the tubes are often  
unevenly heated. By the use of forced draught and  
enriched blast, thermal loadings in boilers can be  
raised to values where there is critical boiling and  
tubes are burned out. This work describes tests made  
with uniform and non-uniform distribution of heat flow  
round the tube perimeter. For uniform heating the  
tubes in the experimental section were made of steel  
EYa-1T; the length of the heated section was 160 mm  
and the internal diameter 5.8 - 6 mm. In the tests  
with non-uniform heating, tubes of variable wall

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SOV/96-5-11-11/21

Critical Heat-flow During Uniform and Non-Uniform Heating of the Perimeter of Steam-Raising Tubes

thickness as depicted in Fig.1, were heated by electric current. The requisite range of wall thickness was obtained by turning the steel tubes off-centre in a lathe. The eccentricity was 0.67, so that when the tubes were heated the heat-flow diagram was as sketched in Fig.2. Because of the non-uniform heating of the perimeter of the experimental tube, the temperature is also non-uniform and there is heat transfer by thermal conductivity in the metal. To reduce this effect, two longitudinal channels were milled in the outer surface of the tubes as shown in Fig.1. The test equipment is illustrated in Figs.3a and b. The tests are made with superheated steam at pressures up to 300 atm and temperatures up to 600°C. The experimental procedures and instrumentation are described. The crisis condition, that is transition from bubble-type boiling to filmwise boiling, may be difficult to

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SOV/96-52-11-11/21

Critical Heat-flow During Uniform and Non-Uniform Heating of the Perimeter of Steam-Rising Tubes

recognise at high pressures and the methods used for this observation are described. The test results obtained with uniform tube heating are graphed in Fig.4. The results are in good agreement with previously published data, including some American results. The corresponding test results with non-uniform heating of the tube are plotted in Fig.5. The critical heat flow is of the same general character as with uniform heating but the numerical values are higher. In Fig.6, a graphical comparison is made between test data obtained with uniform and non-uniform heating. It will be seen that the critical thermal flux on the front surface of the tube with non-uniform heating is 1.6 - 1.8 times

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SOV/96-53-11-11/21

Critical Heat-flow During Uniform and Non-Uniform Heating of the  
Perimeter of Steam-Raising Tubes

higher than with uniform heating. This may be explained by the presence of rotary motion in the turbulent flow. There are 5 figures and 4 Soviet references.

ASSOCIATION: Energeticheskiy institut AN SSSR  
(Power Institute of the Academy of Sciences, USSR)

Card 4/4

MIEPOL'SKIY, Z.L., kand.tekhn.nauk; SHITSMAN, M.Ye., kand.tekhn.nauk;  
MOSTINSKIY, I.L., inzh.; STAVROVSKIY, A.A., inzh.

Effect of inlet conditions on the critical thermal flows during  
the boiling of water in pipes [with summary in English].  
Teploenergetika 6 no.1:80-83 Ja '59. (MIRA 12:1)

1. Energeticheskiy institut AN SSSR.  
(Steampipes) (Thermodynamics)

24(8)

SOV/20-127-2-23/70

AUTHORS: Styrikovich, M. A., Corresponding Member, AS USSR, Mostinskiy, I.L.

TITLE: On the Influence of Uneven Heating of the Pipe Perimeter  
on the Quantity of Critical Heat Flows

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 2, pp 316-319(USSR)

ABSTRACT: Pipe perimeters having uneven and (for comparison) even heat distributions were used for the present experiments. The uneven heat distribution was effected by electric heating of eccentrically bored pipes. In table 1 the dimensions of the pipes investigated are listed. The heat flow at the different points of the pipe circumference was determined by the variation of the electric resistance. The experimental equipment and methods have been described in another paper (Ref 1). Three different values for the specific heat flow were determined:  $q_b$  at the locus of greatest thickness,  $q_m$  at the locus of least thickness, and  $q_{sr}$ , the mean heat flow. Results of measurement are summarized in a diagram (Fig 1). Herefrom it follows that uneven heating reduces the critical heat flow. Values obtained for the critical heat flow in evenly and unevenly heated pipes are given in a diagram (Fig 2). From the two diagrams it may be seen that the influence of uneven heating

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SOV/20-127-2-23/70

On the Influence of Uneven Heating of the Pipe Perimeter on the Quantity  
of Critical Heat Flows

decreases with increasing pipe diameter. After a general discussion of the results an empirical formula is suggested for estimating the influence of uneven heating of the pipes on the critical heat flow. A. A. Stavrovskiy, L. Ye. Faktorovich, I. S. Shagov, M. A. Kalashnikova, M. M. Yegorov, M. I. Petukhov and M. I. Kazennova assisted in the experiments. There are 4 figures, 1 table, and 3 Soviet references.

ASSOCIATION: Energeticheskiy institut im. G. M. Krzhizhanovskogo Akademii  
nauk SSSR  
(Institute of Power Engineering imeni G. M. Krzhizhanovskiy  
of the Academy of Sciences, USSR)

SUBMITTED: April 28, 1959

Card 2/2

MOSTINSKIY, I. L., Cand Tech Sci -- (diss) "Investigation of the effect of non-uniform heating along the periphery of pipes on the sizes of the critical heat flows." Moscow, 1960. 16 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Lenin Power Inst); 150 copies; (KL, 52-60, 120)

456

S/170/60/003/010/001/025  
B019/B054

11,940c

AUTHOR: Mostinskiy, I. L.

TITLE: The Influence of Initial Conditions on the Occurrence of Boiling Crisis Due to Nonuniform Heating of the Perimeter of a Pipe,

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960 Vol. 3 No. 10  
pp. 5 - 10

TEXT: In the introduction, the author discusses some papers on the nonuniform heating of pipes in which vapor is generated. The present paper deals with the determination of critical heat flows and the study of their influence on the nonuniformity of heating of the pipe on the assumption that the medium is strongly throttled at the inlet. Seamless pipes 6 mm in diameter and made of 3R1T (EYa1T) steel were used in the experimental arrangement. Pressure and velocity of the medium were controlled by inlet and outlet valves; the pipes were directly heated with electric current. Measurements were made at pressures of the medium of 26 and 100 atmospheres absolute pressure, and velocities of the medium

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The Influence of Initial Conditions on the  
Occurrence of a Boiling Crisis Due to  
Nonuniform Heating of the Perimeter of a Pipe

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S/70/60/003/010/001/021  
BO19/B054

of 400 and 850 kg/m<sup>2</sup>.sec, and also at 100 atmospheres absolute pressure and 2000 kg/m<sup>2</sup>.sec. The results obtained for uniform and nonuniform heating of the pipe are compared and thoroughly discussed. The author concludes from the analysis of the experimental data that they are independent of the state of the medium at the inlet as long as the medium can be satisfactorily described by formula (1).

$$\frac{q_{cr}^b}{q_{cr}^o} = 1 + 1.2 \frac{1 - 0.4x}{Pe_0^{0.25} Pr_0} \left( \frac{q_b}{q_{cr}^o} + 1 \right) \quad (1)$$

where  $q_{cr}^o$  and  $q_{cr}^b$  are the local values of the critical heat flows at the origin of boiling crisis in uniform and nonuniform heating, and  $x$  is the vapor content of the medium at the place where the crisis occurs. A considerable divergence was found for high vapor contents ( $0.5 - 0.8$ ). This is explained by the fact that in the determination of  $q_{cr}^b$ , the value of (1) is equal to 1.3 throughout the range investigated. There are 3 figures and 7 Soviet

Card 2/3

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The Influence of Initial Conditions on the S/170/60/003/010/00 /02  
Occurrence of a Boiling Crisis Due to B019/B054  
Nonuniform Heating of the Perimeter of a Pipe

references.

ASSOCIATION: Energeticheskiy institut im. G. M. Krzhizhanovskogo  
g. Moskva (Institute of Power Engineering imen  
G. M. Krzhizhanovskiy, Moscow)

SUBMITTED: March 24, 1960

Card 3/3

STYRIKOVICH, M.A.; MIROPOL'SKIY, Z.L., kand.tekhn.nauk; SHITSMAN, M.Ye.,  
kand.tekhn.nauk; MOSTINSKIY, I.L., inzh.; STAVROVSKIY, A.A., inzh.;  
FAFTOROVICH, L.Ye., inzh.

Effect of superimposed elements on the setting up of boiling  
crisis in the steam generating pipes. Teploenergetika 7  
no.5:81-88 Ky '60. (MIRA 13:8)

1. Energeticheskiy institut AN SSSR. 2. Chlen-korrespondent AN  
SSSR (for Styrikovich).  
(Heat--Radiation and absorption) (Boilers)

SHITSMAN, M.Ye.; MOSTINSKIY, I.L.

Temperature conditions in pipes of small diameter in the  
high-speed movement of water and a steam-and-water mixture  
[with summary in English]. Inzh.-fiz. zhur. 4 no.9:80-82  
S '61. (MIRA 14:8)

1. Energeticheskiy institut im. G.M. Krzhizhanovskogo,  
g. Moskva.  
(Pipe--Hydrodynamics)

S/862/62/002/000/008/029  
A059/A126

AUTHOR: Mostinskiy, I.L.

TITLE: Use of the law of corresponding states in the calculation of the heat transfer in a boiling liquid

SOURCE: Teplo- i massoperenos. t. 2: Teplo- i massoperenos pri fazovykh i khimicheskikh prevrashcheniyakh. Ed. by A.V. Lykov and B.M. Smol'skiy. Minsk, Izd-vo AN BSSR, 1962. 94 - 99

TEXT: In this paper an attempt is made to develop a simple formula based on minimum data on the thermophysical properties of the respective body by further expanding the method of V.M. Borishanskiy (Energomashinostroyeniye, no. 7, 1958). It has been established that each thermophysical property of any liquid at the saturation temperature corresponding to unit reduced pressure  $p_* = 0.03 \text{ p}_{\text{cr}}$  satisfies the unique dependence

$$\Phi(p_{\text{cr}}) = \frac{\alpha}{\beta(p/p_{\text{cr}})^{q/0.7}} \quad (4)$$

and the heat-transfer coefficient

Card 1/2

Use of the law of corresponding states in the ...

S/862/62/002/000/008/029  
A059/A126

$$\alpha = q^{0.7} F(p/p_{cr}) \Phi(p_{cr}), \quad (5)$$

where  $q$  is the relative heat flow,  $F(p/p_{cr})$  the function of V.M. Borishanskiy, characterizing the variation of the intensity of heat transfer in dependence on the relative pressure of the boiling liquid,  $p/p_{cr}$ , and  $\Phi(p_{cr})$  is some function reflecting the totality of physical properties of the boiling liquid determining the intensity of heat transfer at  $p_* = 0.03 p_{cr}$ . Thus, the heat-transfer coefficient in a boiling liquid can be determined from three given parameters: relative heat flow, and working and critical pressures. There are 5 figures and 1 table.

ASSOCIATION: Energeticheskiy institut im. G.M. Krzhizhanovskogo (Power Engineering Institute imeni G.M. Krzhizhanovskiy)

Card 2/2

S/096/63/000/004/008/010  
E194/E455

AUTHOR: Mostinskiy, I.L., Candidate of Technical Sciences  
TITLE: Application of the law of corresponding states to  
calculation of heat transfer and critical heat-transfer  
rates during boiling of liquids  
PERIODICAL: Teploenergetika, no. 4, 1963, 66-71

TEXT: The formulas which are generally used to calculate heat transfer during boiling with bubble formation are derived from experimental data by means of the theory of similarity or the theory of dimensions. These formulas have the disadvantages of being very inaccurate and of requiring knowledge of the thermal-physical properties of the working substance under the working conditions, which are seldom known accurately. It is accordingly of interest to study the application of the law of corresponding states proposed by V.M.Borishanskiy to experimental data, selecting as the initial pressure  $p_x = 0.03 p_{cr}$  (for most organic liquids  $p_x = 1$  to 2 atm). Then the experimental data are presented in the following form:

$$\frac{\alpha}{\alpha_x} = F_a \left( \frac{p}{p_{kp}} \right) \quad (1)$$

Card 1/4

S/096/63/000/004/008/010  
E194/E455

Application of the law ...

Although the right-hand side of this expression has been determined from experimental data, the method does not solve the problem completely because the physical parameters must still be extrapolated to higher pressures and temperatures. Moreover, new heat-transfer media are coming into use and their properties are not fully known. It is accordingly required to obtain a very simple formula based on the minimum thermal-physical properties of the working substance which, on the basis of the law of corresponding states, can be represented in the form of two factors, one having dimensions and the other not. Thus the following expression is derived.

$$v_* \approx \text{const};$$

$$v''_* \approx \text{const};$$

$$r_* \sim p_{kp}^{\alpha}$$

$$c_p \sim p_{kp}^{1/4}$$

$$\eta_* \sim p_{kp}^{0.04}$$

$$\sigma_* \sim p_{kp}^{0.53}$$

$$U_* \sim p_{kp}^{1/4}$$

Card 2/4

Application of the law ...

S/096/63/000/004/008/010  
E194/E455

where  $P_{kp} = P_{cr}$  = critical pressure. These relationships agree with experimental data to within  $\pm 30\%$ , except in the case of the specific heat  $c_p'$  which is proportional to  $P_{kp}^{-4}$  and not 1.4. Thus any physical parameter of boiling liquid or its vapor may, for the given corresponding condition ( $p_x = 0.03 P_{cr}$ ), be considered as a unique function of  $P_{cr}$ . The following empirical formula is then derived

$$\alpha = 0.10 P_{cr}^{0.69} q^{0.7} \left[ 1.8 \left( \frac{P}{P_{cr}} \right)^{0.17} + 4 \left( \frac{P}{P_{cr}} \right)^{1.2} + 10 \left( \frac{P}{P_{cr}} \right)^{10} \right] \quad (13)$$

where  $\alpha$  - the heat-transfer coefficient in boiling, kcal/m<sup>2</sup>hour °C,  
 $P$  - working pressure, atm. It is claimed that the worst error in determining  $\alpha$  from this formula should not exceed  $\pm 50\%$ . Various published experimental figures have been compared with those obtained by the formula, including data for inorganic and organic liquids over a range of temperatures and pressures. Most Card 3/4

Application of the law ...

S/096/63/000/004/008/010  
E194/E455

of the figures lie within  $\pm 30\%$  of the line represented by the formula and only a very few lie outside  $\pm 50\%$ . It is concluded that the formulas can be used to determine the heat-transfer coefficient to a boiling liquid from three given parameters: the specific heat-transfer rate and two pressures ( $p$  and  $P_{cr}$ ) and the value of the critical thermal flux may be calculated from two parameters:  $p$  and  $P_{cr}$ . There are 4 figures and 1 table.

ASSOCIATION: EPIN

Card 4/4

L 30052-65 ENT(1)/EWP(m)/EPR/FCS(k)/EWA(1) Pd-1/Ps-4 WM  
ACCESSION NR: AP5006231 S/0170/65/008/002/0238/0242

AUTHOR: Vizel', Ya. M.; Mostinskiy, I. L.

TITLE: Curvature of a jet in a deflecting flow /8  
SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 8, no. 2, 1965, 238-242

TOPIC TAGS: jet mixing, jet curvature, deflecting flow, gas jet, jet calculation

ABSTRACT: The curvature of axes of plane and circular gas jets in a deflecting gas flow was studied as a part of the jet mixing problem. Mathematical transformations of the momentum equation on the basis of jet drag values yielded new equations for calculating the curvature of plane and circular gas jets in a deflecting flow. Results calculated by the new equations compare favorably (within 20%) with published experimental data obtained under the same conditions. Orig. art. has: 3 figures and 20 formulas. [PS]

ASSOCIATION: Nauchno-issledovatel'skiy institut vysokikh temperatur,  
Moscow (Scientific Research Institute of High Temperatures)

Card 1/2

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001135410011-4

L 30052-65

ACCESSION NR: AP5006231

SUBMITTED: 13May64

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NO REF Sov: 008

OTHER: 001

ATD PRESS:

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001135410011-4"

MOSTINSKIY, T.I.  
SEREBRYAKOV, L.P.; VOLODCHENKO, K.G.; MOSTINSKIY, T.I.; PETROV, P.A.  
Experience gained from consolidating drilling crews into a unified  
organization with payments based on group piece work. Razved. i okh.  
nedr 23 no.4:55-60 Ap '57. (MIRA 11:1)  
1. Otdel ekonomiki geologo-razvedochnykh rabot Vsesoyuznogo nauchno-  
issledovatel'skogo instituta metrologii i standartizatsii.  
(Boring) (Wages)

VOLODCHENKO, K.; KRIVENKO, M.; MOSTINSKIY, T. I.

New method for calculating wages of workers of exploratory  
drilling crews. Biul. nauch. inform.: trud i zar. plata no. 4:  
3-9 '59. (Miners) (Wages--Accounting) (MIRA 12:6)

VOLODCHENKO, K.G.; GUBERMAN, D.M.; MOSTINSKIY, T.I.

Analysis of the operating results of hard-faced drill bits and their  
efficiency in use. Razved. i okh. nedr 26 no.9:31-33 S '60.

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo  
syr'ya. (MIRA 15:7)

(Boring machinery)

MOSTIPAK, V. M., inzh.

Grigorii Teriaev's brigade of communist labor. Transp.  
stroi. 10 no.8:8-9 Ag '60. (MIRA 13:8)  
(Moscow Province--Building)

1. MOSTIPAN, G. G.
  2. USSR (600)
  4. Windmills
  7. Windmill in the apiary. Pchelovodstvo 30, No. 3, 1953.
- 
9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

MOSTIPAN, L. [Mostypan, L.]

Work practices of the Chernigov Province Interfarm Building Organization. Sil' bud. 9 no. 6:6-7 Je '59. (MIRA 12:9)

1. Golova radi Chernigiv's'kogo oblastnogo kolkhozopbudu.  
(Chernigov Province-Building)

MOSTIPAN, L. [Mostypan, L.]

First steps of the interfarm planning organization. Sil'. bud. 8  
no.2:11-12 F '60. (MIRA 13:7)

I. Nachal'nik Chernigovskogo oblastnogo upravleniya po stroitel'stvu  
v kolkhozakh. (Chernigov Province--Construction industry)

MOSTIPAN, L.I.; IVANOV, G.G. [Ivanov, H.H.], kand.ekon.nauk

Interfarm cooperation. Nauka i zhyttia 10 no.2:35-37 F '60.  
(MIRA 13:6)

1. Predsedatel' soveta Chernigovskogo "Oblmishkolgospbudn."  
(Collective farms--Interfarm cooperation)

ACC NR: AP60051349

SOURCE CODE: UR/0126/66/021/002/0199/0202

AUTHORS: Reshetnyak, T. I.; Mostipan, V. K.

ORG: none

TITLE: Study of the kinetics of aging of alloys of the system Al--Si--Cu--Mg containing modifying additives

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 2, 1966, 199-202

TOPIC TAGS: METAL AGING, aluminum alloy, silicon containing alloy, electron microscopy/ ALUM aluminum alloy

ABSTRACT: The effect of Fe, Zr, Mn, and Ti additives on the kinetics of aging of alloys of different composition belonging to the system Al--Si--Cu--Mg was studied by means of electron microscopy.<sup>6</sup> The study supplements previously reported results (Avtorskoye svidetel'stvo No. 159039 (Byulleten' izobreteniy, 1963, No. 23)). Photographs of the microstructures of the specimens are presented. The maximum concentrations of Guignet-Preston zones in the alloys were determined as a function of the aging temperature. The maximum zone density was obtained when the specimens were aged at 150°C for 25 hours and 185°C for 3 hours respectively. It is concluded that the optimum temperature interval for aging of alloy ALUM lies between 165--175°C. The

Card 1/2

UDC: 669.715

L 35905-66

ACC NR: AP6007349

following engineers took part in the investigation: A. P. Shvets, V. S. Babkin,  
Zh. P. Ivanova, and I. S. Bakanova. Orig. art. has: 1 table and 5 figures.

SUB CODE: 11/

SUBM DATE: 03Feb65/

ORIG REF: 004

Card 2/2 *all*

ANDON'YEV, S.M., doktor tekhn.nauk; TSELYUKO, Yu.M., inzh.;  
KATSENELENBOGEN, L.B., inzh.; MOSTITSKIY, A.V., inzh.;  
RUDNITSKIY, Ya.N., inzh.; PEVKO, A.P., inzh.; TRUSH, V.I., inzh.

Investigating thermal processes in converter "caissons" and  
chimneys. Stal' 22 no.2:173-176 F '62. (MIRA 15:2)

1. Gosudarstvennyy institut po proyektirovaniyu metallurgicheskikh zavodov i predpriyatiy.

(Bessemer process)  
(Heat—Transmission)

MOSTKOV, B.M.

Supply interfarm building organizations with industrial building materials. Sel'.stroi. 14 no.8:17 Ag '59.  
(MIRA 12:12)

1. Nachal'nik ekonomiceskogo otdela finansova-ekonomiceskogo upravleniya TSentrosoyuza.  
(Building materials)

MOSTKOV, Mikhail Abramovich, prof. [deceased]; TSIKLAURI, D.S.,  
red.; GIORGADZE, O.N., red. izd-va; BOKERIYA, E.B., tekhn.  
red.

[Elements of the theory of water supply] Elementy teorii  
vodosnabzheniya. Tbilisi. Izd-vo AN Gruz.SSR, 1963. 139 p.  
(MIRA 16:11)  
(Water supply)

MOSTKOV, Mikhail Abramovich, prof., doktor tekhn. nauk; MAMRADZE,  
G.P., kand. tekhn. nauk, red.; KISELEV, P.G., red.;  
LARIONOV, G.Ye., tekhn. red.

[Applied hydromechanics] Prikladnaia gidromekhanika. Mo-  
skva, Gosenergoizdat, 1963. 462 p. (MIRA 17:1)

1. Chlen-korrespondent AN Gruz.SSR (for Mostkov).

MOSTKOV, M. M.

Dissertation: "An Analytical Investigation of the Quality Factors of Gearings." Cand Tech Sci, Moscow Machine Tool and Tool Inst imeni I. V. Stalin, 30 Jun 54. (Vechernaya Moskva, Moscow, 22 Jun 54)

SO: SUM 318, 23 Dec 1954

USSR/Engineering - Hydraulics, Pumps Oct 52

"On Hydraulic Impacts in the Suction Pipes of Piston Pumps," V. M. Mostkov Cand Tech Sci

Gidrotekh i Meliorats, No 10, pp 47-51

Disproving generally accepted assumption of instantaneousness of pressure changes in suction pipes, states that pressure propagates with certain velocity, and its changes must be described by eqs of hydraulic impact. Describes method which permits detn of pressure in every point along the length of suction pipe, thus making possible establishment of air gaps and calc of parameters of pump installation.

247T47

1. MOSTKOV, V. M.
2. USSR (600)
4. Rock Drills
7. Effect of the diameter of the boring head on speed of blast-hole drilling.  
Dokl. AN SSSR 89, No. 5, 1953.
  
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Unc1.

MOSTKOV, V.M., kandidat tekhnicheskikh nauk; ASSONOV, V.A., otvetatvennyy  
redaktor; Gnedin, V.Ye., redaktor; ANDREYEV, G.G., tekhnicheskiy re-  
daktor.

[Selecting bore hole diameters for underground mining] Vybor diametrov  
shpurov pri provedenii podzemnykh vyrabotok. Moskva, Ugletekhizdat,  
1954. 116 p.  
(Mining engineering) (Boring)

MOSTKOV, V.M., kandidat tekhnicheskikh nauk; PRIYMAK, P.I., kandidat  
tekhnicheskikh nauk.

Boring frame for hydrotechnical tunnelling. Gidr.stroi 23 no.6:  
4-6 '54.  
(Tunneling)

MOSTKOV, V.M., kandidat tekhnicheskikh nauk.

High-speed tunneling techniques (from "Water Power," Ja '56).  
Gidr.stroi. 25 no.9:60-61 O '56. (MLRA 9:11)  
(Tunneling)

KUPERMAN, Vladimir Leonovich; MAZUR, Aleksandr Maksimovitch; MOSTKOV,  
Vladimir Mikhaylovich; PRIYMAK, Porfiriy Ivanovich; CHLOV,  
revisor; VONOVIN, K.P., tekhnicheskiy redaktor

[Underground hydroelectric power plants] Podzemnye gidroelektro-  
stantsii. Moskva, Gos.energ.izd-vo, 1957. 102 p. (MIRA 10·11)  
(Hydroelectric power stations)

14(10)

SOV/112-59-3-4664

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 3, p 53 (USSR)

AUTHOR: Mostkov, V. M.

TITLE: Improving the Organization and Mechanization of Tunneling Used in Constructing Hydroelectric Generating Plants (Voprosy usovershenstvovaniya organizatsii i mekhanizatsii tunnel'nykh rabot na stroitel'stve GES)

PERIODICAL: Tr. n.-i. sektora Mosk. fil in-ta "Orgenergostroy," 1957,  
Nr 1, pp 25-35

ABSTRACT: On the basis of modern experience in the USSR and in foreign countries, the following steady average monthly rate of tunneling (for hydraulic structures) can be expected: 130-160 m/month for tunnels with a cross-sectional area up to 12 m<sup>2</sup>, 100-130 m/month for cross-sections of 12-40 m<sup>2</sup>, 70-100 m/month for cross-sections of 40-90 m<sup>2</sup>. Measures improving organization and mechanization of tunneling are described, recommendations on the heading schemes and on the organization of cutting, drilling-blasting, and other types of work are given.

A.I.I.

Card 1/1

MOSTKOV, V.M., kand.tekhn.nauk; VARTANYAN, A.A.

New method of tunneling in weak and fractured rocks. Trudy Nauch.-issl.  
sekt.Mosk.fil.Inst."Orgenergostroi" no.3:54-56 '59. (MIRA 14:7)  
(Tunneling)

MOSTKOV, Vladimir Mikhaylovich, kand.tekhn.nauk; POKROVSKIY, M.A., gorn.  
inzh., retsenzent, red.; SHUSTOVA, V.M., red.izd-va; DOBU-  
ZHINSKAYA, L.V., tekhn.red.

[Gunita lining of mine workings] Zakreplenie gornykh vyrabotok  
shprits-betonom. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po  
chernoi i tsvetnoi metallurgii, 1958. 73 p. (MIRA 12:8)  
(Mining engineering) (Gunita)

MOSTKOV, V.N., kand.tekhn.nauk; SAVIN, V.I., inzh.

Use of coarse-aggregate gunite in tunnels of hydroelectric  
developments. Gidr. stroi. 30 no.9:13-16 S '60.  
(MIRA 13:9)

(Tunneling) (Gunite)

KUPERMAN, V.L., inzh.; OBREZKOV, S.S., inzh.; ERISTOV, V.S., red.; BOBRITSKIY, M.M., inzh., red.; MOSTKOV, V.M., inzh., red.; KOZANOV, K.A., inzh., red.; TAYCHER, S.I., inzh., red.; KORNILOV, A.M., red.; LARIONOV, G.Ye., tekhn.red.

[Design and construction of hydraulic tunnels and underground hydroelectric power stations] Proektirovanie i sormuzhenie gidrotekhnicheskikh tunnelei i podzemnykh GES; materialy soveshchaniia. Moskva, Gosenergoizdat, 1963.  
(MIRA 16:10)  
231 p.

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Eristov).  
(Hydroelectric power stations)

MOGTSKOV, Vladimir Mikhaylovich; ERISTOV, V.S., retsenzent; CHECHKOV,  
L.V., red. izd-va; SHKLYAR, S.Ya., tekhn. red.; LOMILINA,  
L.N., tekhn. red.

[Construction of underground installations of large cross-section] Stroitel'stvo podzemnykh sooruzhenii bol'shogo secheniya. Moskva, Gosgortekhizdat, 1963. 306 p.  
(MIRA 16:7)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury  
SSSR (for Eristov).  
(Mining engineering)

PHASE I BOOK EXPLOITATION

SOV/6591

Mostkov, Vladimir Mikhaylovich

Stroitel'stvo podzemnykh sooruzheniy bol'shogo secheniya (Construction of Large Underground Structures) Moscow, Gosgortekhizdat, 1963. 306 p. 2200 copies printed.

Reviewer: V. S. Eristov, Corresponding Member, Academy of Construction and Architecture SSSR; Ed. of Publishing House: L. V. Chechkov; Tech. Eds.: S. Ya. Shklyar, ~~L. N. Lomilina~~.

PURPOSE: The book is intended for technical personnel engaged in the construction and design of underground structures; it may also be useful to teachers and students in schools of higher education.

COVERAGE: The book deals with the design and construction of underground structures of large cross section (100 m and greater) for various purposes, such as hydraulic engineering and transportation tunnels, underground factories, electric power stations,

Card 1/5  
2

**Construction of Large Underground Structures****SOV/6591**

storehouses, etc. An attempt is made to generalize from experiences in the design and construction of such underground structures and to indicate further steps for speeding up the construction and reducing costs. The author thanks V. S. Eristov, Professor N. M. Pokrovskiy, Doctor of Technical Sciences, and Engineer M. N. Belkin. There are 117 references, 61 Soviet and 56 non-Soviet.

**TABLE OF CONTENTS:**

|   |    |
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| Preface   | 3  |
| <b>PART I. DESIGN PRINCIPLES</b>  |    |
| Ch. I. The Domain and Conditions for Erection of Large Underground Structures | 5  |
| 1. Characteristic large underground structures                                | 5  |
| 2. Technical and economic indexes   | 30 |

**Care 2/5**

MOSTKOVA, O. P.

**USSR/Engineering - Electrical Engineering, Jul 51**  
**Rectifiers**

"Commutation Process in a Single-Phase Bridge Circuit With Very High Inductive Component," Yu. G. Tolstov, G. P. Mostkova

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 7,  
pp 1004-1014

Analyzes electromagnetic processes in single-phase bridge circuits and discusses these processes and restoration of inverse voltage in application to individual cases such as dry rectifiers, keno-trons, gas-filled rectifier tubes and mercury-arc rectifier. Submitted by Acad A. V. Vinter 23 Dec 50.

205T14

MOSTKOVA, G.P.

Protective systems of "saturated" choke rectifiers. Izv. AN SSSR Otd. tehn.  
nauk no.11:1532-1544 N '53. (MIRA 6:12)

1. Predstavleno akademikom G.M.Krzhishanovskim,  
(Electric current rectifiers)

SOV/24-58-12-5/27

AUTHOR: Kovalev, F.T., Moskova, G.P. (Moscow)

TITLE: The Operation of Saturable Reactors in d.c. Transmission Converters Subject to Control and Reversal (Rabota nasyshchayushchikhsya reaktorov v preobrazovatel'nykh ustanovkakh peredachi postoyannogo toka pri nalichii regulirovaniya i reversa)

PERIODICAL: Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 12, pp 32-37 (USSR)

ABSTRACT: The saturable reactors are inserted in the anode circuits of mercury rectifiers, which are shunted by capacitors, as shown in the three-phase bridge circuit of Fig.1. The physical causes of the waveforms for the anode voltage  $u_a$ , phase current  $i$ , and reactor voltages  $u_1$  to  $u_3$  shown in Fig.2 (for inverter operation) are discussed. Eq.1 gives the reactor voltage during the second magnetization;  $v_{20}$ , the point where this second phase begins, is given roughly by Eq.2 (where  $RC$  is in  $\mu$ sec). The induction at the end of this second magnetization is given by Eq.3. Fig.3 describes the state of the core during these three phases of magnetization; Eq.4 gives

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SOV/24-58-12-5/27

The Operation of Saturable Reactors in d.c. transmission Converters  
Subject to Control and Reversal

the voltage on the reactor during the third magnetization phase. Eq.5 defines the duration of this phase ( $\Delta v_3$ ). Fig.4 gives the relation of the inverter extinction angle  $\delta$  with the duration of the first phase. Fig.5 shows the dependence of  $\delta'$  (the angle of extinction of apparatus working in two inverter regions with  $\delta = 60^\circ$  and  $\delta = 15^\circ$ ) and of  $\delta$  on the reactor power  $P_{\mu}$ . Fig.6 relates  $\delta'$  and  $\delta$  to the design power of the reactor and also gives the  $\Delta\beta$  required to keep  $\delta$  constant. Eq.6 relates  $v_1$  to the design power (approximately; see Fig.4). Eq.7 gives the point at which the magnetization changes sign and Eq.8 the time for which the reactor is not ready for a fresh rectification phase. Fig.5 shows the anode voltage and phase current with and without the reactors, and the flux in the cores, for two values of  $\delta$ . It is concluded that brief operation as an inverter under fault conditions need not be hazardous, but that prolonged

Card 2/3

The Operation of Saturable Reactors in d.c. Transmission Converters  
Subject to Control and Reversal

Sov/24-58-12-5/27

working at small extinction angles is inadvisable,  
unless special measures (reactor shunts etc.) are taken.  
There are 6 figures and 8 references of which 5 are  
Soviet, 1 Italian, 1 English and 1 German.

SUBMITTED: 21st April 1958.

Card 3/3

MosTKova, G.P.

14(6),8(0) PHASE I BOOK EXPLOITATION 207/3071

Akademika Nauk SSSR. Energeticheskiy Institut  
Elektroenergetika, Typ. 1 (Electric Power Engineering, № 1). Moscow,  
Izd-vo AN SSSR, 1959. 159 p. Errata slip inserted. 2,000 copies  
printed.

Eds. of Publishing House: P. P. Ogorodov and Yu. M. Grigor'ev; Tech.  
Ed.: Ye. V. Zelenkovskiy; Editorial Board: Yu. G. Tolstoy, Doctor  
of Technical Sciences (Resp. Ed.), I. M. Markovich, Doctor of  
Technical Sciences, I. S. Stakhanov, Doctor of Technical Sci-  
ences, P. I. Zubkov, Candidate of Technical Sciences, V. I. Levitov,  
G. V. Rikimovich, Candidate of Technical Sciences, V. I. Levitov,  
Candidate of Technical Sciences, and M. D. Bol'shakov (Secretary).

PURPOSE: This collection of articles is intended for specialists  
in the various fields of electric power engineering treated in it.  
COVERAGE: The first issue of the collection of articles  
"Elektroenergetika," appeared in April 1959. It is published by  
ANM Izdatel'stvo G. H. Kurchatovskogo of the Academy of Sciences, USSR.  
The articles in this issue are based on research and work by the  
authors under the auspices of ENI. The articles are on a high  
theoretical and technical level and represent original contribu-  
tions to various present-day problems in electrical engineering.  
References are given after most of the articles.

TABLE OF CONTENTS:  
Foletov, Yu. G., and A. L. Sankov. Arc Rectifiers With Increased  
Frequency

In 1954 and 1955 several theoretical and experimental investi-  
gations were made at the Institute in order to determine the  
possibility of using hot-cathode arc rectifiers with increased  
pressure for long-distance d-c power transmission. The investi-  
gations were aimed at improving the parameters of E. Marx arc  
rectifiers produced in Germany before and during the war. The  
authors conclude that despite improvements modern arc  
rectifiers are superior to the hot-cathode ones and can be used  
for the first time in long-distance d-c power transmission. The  
following organizations and scientists participated  
in the investigations together with ENI: N. I. Terter, D. A. Petrov,  
K. R. Korol'yov, N. L. Petrushevich, M. G. N. A. Rapov,  
USSR - N. B. Byvalin and the leading scientific Academy of Sciences,  
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Meyran, E. R., Ya. G. Burmaka, and S. N. Chil'derik. Model of D-C  
Electric Power Transmission System of the Power Engineering Lab-  
oratory Izdatel'stvo N. A. Shatselev, ENI AN SSSR 12

This d-c high-voltage network analyzer (model) was built at the  
laboratory in 1952/53. The following line indications are being  
conducted with its increase of reliability and stability of  
network operation and effect of d-c electric power transmission  
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The investigations are being conducted under the supervision  
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As a result of investigations conducted at the NIIP, ENI,  
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complex oscillations generated in converter installations.  
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(MIRA 14:8)

(Electric current rectifiers) (Bridge circuits)

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Calculation of the parameters and characteristics of a  
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Elektricheskovo no.10:38-46 O '61. (MIRA 14:10)

1. Energeticheskiy institut im. Krzhizhanovskogo.  
(Electric current rectifiers)

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Comparison of networks for connecting saturable reactors used  
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TOLSTOV, Yu.G.; MOSTKOVA, G.P.; KOVALEV, F.I.; TAFT, V.A., doktor tekhn. nauk, prof.; ZAVOZIN, L.F., red. izd-va; DOROKHINA, I.N., tekhn. red.

[Three-phaze semiconductor power rectifiers with magnetic amplifier control] Trekhfaznye silovye poluprovodnikovye vypriamiteli, upravliaemye drosseliami nasyshcheniia. Moskva, Izd-vo Akad. nauk SSSR, 1963. 171 p. (MIRA 16:7)  
(Electric current rectifiers)

ACC NR: AM6014513

(N)

Monograph

UR/

Kovalev, Feliks Ivanovich; Mostkova, Galina Pavlovna; Sviridov, Artem Fedorovich;  
Shukalov, Vladislav Fedorovich

Marine static/semiconductor/ converters (Sudovyye staticheskiye/ poluprovodnikovyye/  
preobrazovateli) Leningrad, Izd-vo "Sudostrayeniye", 1965, 240 p. illus., biblio.  
1,600 copies printed.

TOPIC TAGS: ship component, electric energy conversion, frequency conversion, semi-conductor rectifier, electric filter

PURPOSE AND COVERAGE: This book presents marine static electric power converters (rectifiers, inverters, frequency converters) in semiconductor valves, principles of their action, and a comparison of different basic schemes. It also includes recommendations for the selection of more optimal schemes for marine static electric power converters in semiconductor valves. According to the given design relationship it is possible to determine parameters of basic elements of converter units and construct their operating characteristics. Also included are marine rectifier aggregates in semiconductor valves with regulated and stabilized output voltage and current for supplying various types of loads. External and regulating characteristics are shown, such as the power factor, devices protecting against overcurrents and overvoltages, filters, structures and means of cooling marine rectifier aggregates. The book is recommended for engineers and technicians working with the de-

Card 1/2

UDC621.314:629.12

ACC NR: AM014513

sign and assembly of marine electric power units. It also can be useful to students in ship-building institutes.

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SUB CODE: 13,10 /SUBM DATE: 22Oct65/ ORIG REF: 043/ OTH REF: 025/

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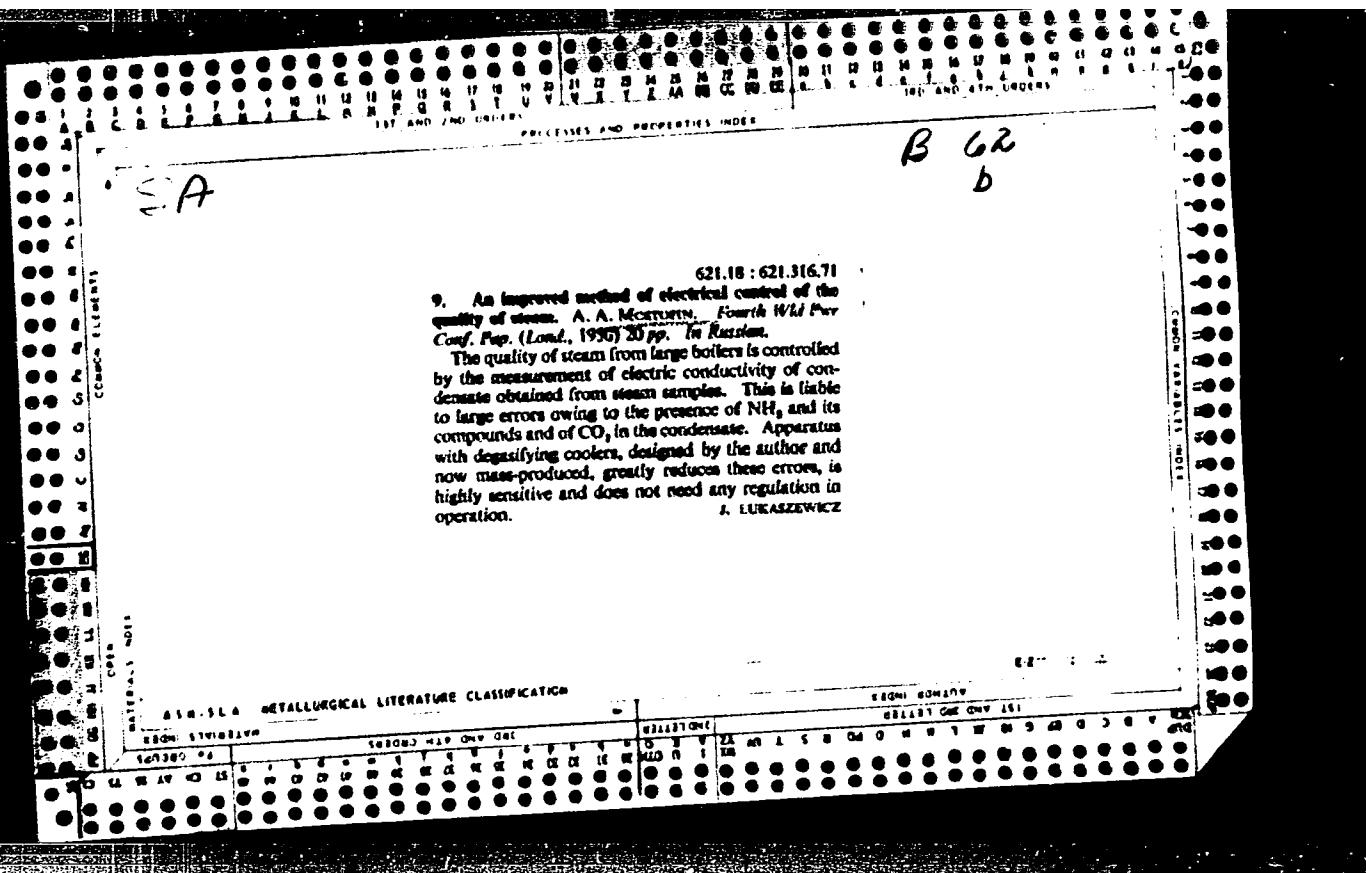
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